WESTON SM MANAGERS DESIGNERS/CONSULTANTS
River Center, 111 North Canal Street, 8th Floor, Suite 855,
Chicago, IL 60606 • (312) 993-1067 • FAX (312) 993-0226

TECHNICAL ASSISTANCE TEAM FOR EMERGENCY RESPONSE REMOVAL AND PREVENTION
EPA CONTRACT 68-01-7367

Mr. Duane Heaton
Deputy Project Officer
Emergency Support Section, 5 HS-12
U.S. Environmental Protection Agency
230 South Dearborn Street
Chicago, Illinois, 60646

June 28, 1990

TAT-05-G2-01852

Re: HIMCO Landfill, Elkhart, Indiana
TDD# 5-9004-10

Dear Mr. Heaton:

On April 12, 1990, the U.S. Environmental Protection Agency (U.S. EPA) tasked the Technical Assistance Team (TAT) to conduct a sampling action at the HIMCO Landfill (HIMCO), National Priorities List (NPL) site in Elkhart, Indiana (Figure 1). This sampling action request was prompted by local residents' complaints of odor and discoloration of their residential well water. This letter report includes a brief site history, a description of surficial geology, activities and observations during the TAT sampling action, and TAT sampling results.

The HIMCO site, located along the northwest edge of Elkhart and Jamestown, operated as a landfill from 1960 to 1977. The site is bordered to the east by Nappanee Street Extension, to the south by County Road 10, to the west by open fields and to the north by open fields and a small lake (Figure 2). The site comprises 30 acres of privately-owned landfill which previously accepted a variety of commercial, residential, medical and industrial wastes. The area surrounding HIMCO consists of residential and light commercial properties.

Surficial geology at HIMCO is characterized by Pleistocene-aged valley train outwash deposits which are composed mainly of fine-grained sand interbedded with clay and silt units. The average thickness of the unconsolidated deposits is 175 feet. The bedrock in the HIMCO area consists of the Mississippian-aged Coldwater Shale. Typically, there are two productive aquifers located at approximate depths of 50 feet and 150 feet which are separated by confining layers of clay and silt. Ground water directional flow is to the south as determined by several monitoring wells located around the HIMCO site. The HIMCO site topography was originally a lowlands, but by 1977 the landfill surface elevation had risen by an average of 15 feet.

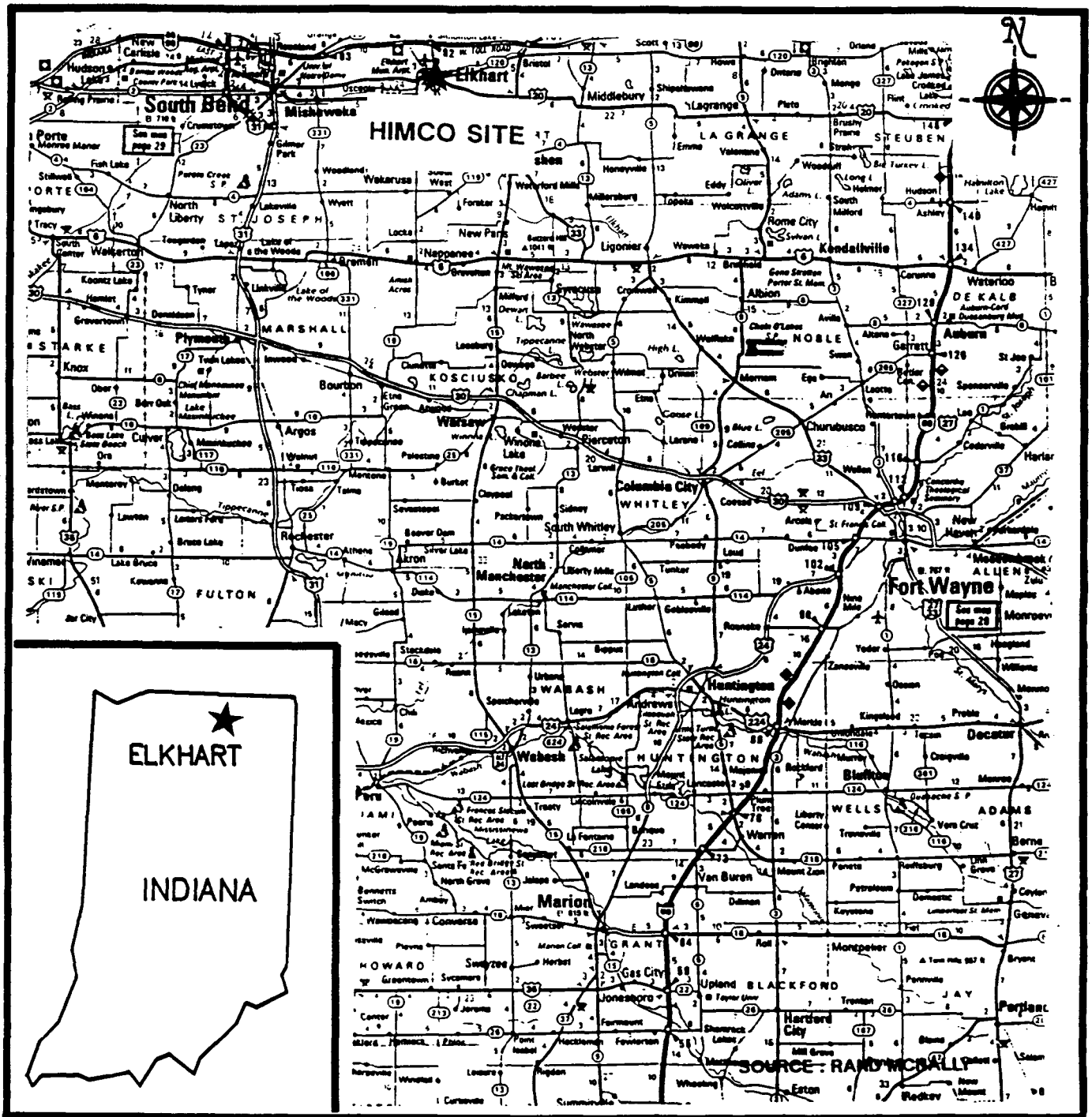


FIGURE 1

SITE LOCATION MAP

HIMCO LANDFILL

ELKHART, INDIANA

SCALE: 1/2 INCH = 5 MILES

WESTON MANAGERS DESIGNERS/CONSULTANTS

MAJOR PROGRAMS DIVISION

REGION V TECHNICAL ASSISTANCE TEAM

DRAWN BY	DATE	PCS #
K. AXE	4-25-90	2693
APPROVED BY	DATE	TDD #
C. CARON	4-25-90	5-9004-10

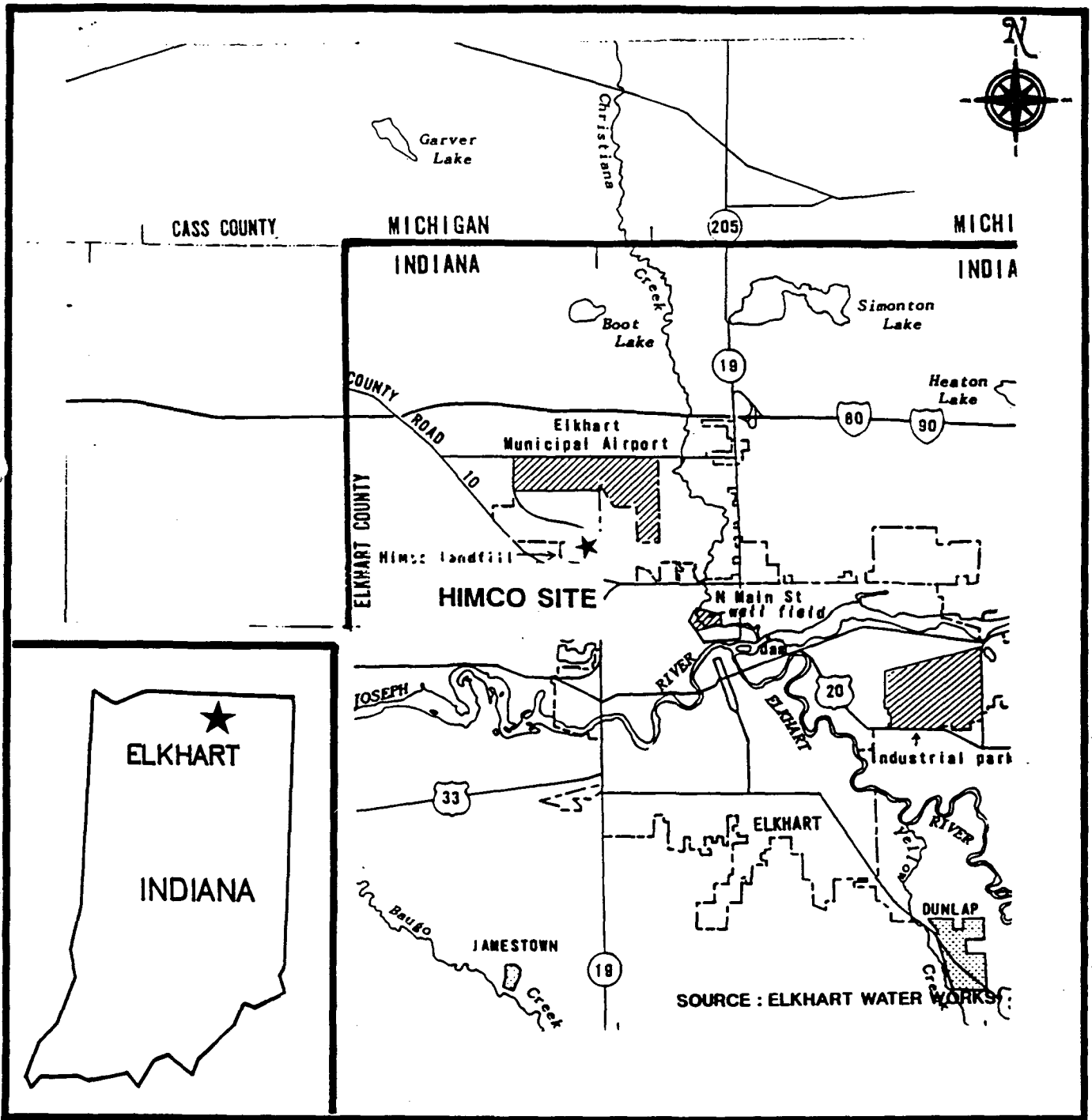


FIGURE 2

SITE LOCATION MAP

HIMCO LANDFILL

ELKHART, INDIANA

SCALE: 1 INCH = 1.5 MILES

WESTON MANAGERS DESIGNERS/CONSULTANTS

MAJOR PROGRAMS DIVISION

REGION V TECHNICAL ASSISTANCE TEAM

DRAWN BY	DATE	PCS #
K. AXE	4-25-90	2693
APPROVED BY	DATE	TDD #
C. CARON	4-25-90	5-9004-10

Elkhart municipal water wells are located approximately one mile south of the site. Water production is from both the upper and lower aquifers, although the lower aquifer is more prolific. Periodic monitoring of these wells for volatile organic compounds (VOC) and metals by the Elkhart Water Works (EWW) has detected no contaminants.

From 1960 to 1977, HIMCO was operated by HIMCO Waste Away Services, Inc. Most of Elkhart's commercial and industrial wastes, the majority being pharmaceutical by-products and paper refuse generated by local industries, were disposed at HIMCO during this period.

In 1971, the Indiana State Board of Health (ISBH) identified the HIMCO site as an open dump. In 1974, residents living to the immediate south of the site complained to EWW of odor and discoloration of the water from their shallow aquifer wells. In 1977, the ISBH forced the closure of the landfill. Deeper residential wells were installed into the lower aquifer, and the landfill was capped with a one-foot layer of sand and top soil.

In 1982, monitoring wells surrounding the HIMCO site were installed by the U.S. Geological Survey (USGS) at the request of EWW. The wells were sampled on a yearly basis, and trace amounts of trichloroethylene (TCE), toluene and other VOCs were detected. The USGS continues to monitor the wells, sampling every three years.

On October 10, 1989, TAT members Tammy Dillard and Kevin Axe met with Larry Sears of EWW to conduct a visual inspection of the HIMCO site as part of the U.S. EPA NPL site review. TAT observed that the site was capped and that conditions outlined in Part 300.415(b)(2) of the National Contingency Plan to be considered to warrant a removal action did not appear to be present.

On April 17, 1990, TAT members Mark Balazs and Kevin Axe along with U.S. EPA On-Scene Coordinators (OSC) Ken Theisen and Paul Steadman met with Angela West and Roger Bowser of the Elkhart County Health Department (ECHD) and Doug Fisher of the Indiana Department of Environmental Management (IDEM) at the Elkhart County Courthouse. The meeting was prompted by complaints from several residents to the immediate south of HIMCO of potable water contamination (Figure 3). The residents requested that their wells be sampled to determine if contamination had penetrated the lower aquifer. TAT collected residential well samples from six homes south of the site which use the lower aquifer as their potable source, and from six residences to the east of the site, whose potable water source

TABLE 1

ANALYTICAL RESULTS OF TAT WATER SAMPLING*
HIMCO SITE, ELKHART, INDIANA
APRIL 17, 1990
TOTAL METALS (Concentrations in ppm)

Metal	S60	S61	S62	S63	S64	S65	S66	S67	S68	S69	S70	S71	S72	S73
Arsenic	ND	.003	.006	.003	.004	.002	ND	.007	.006	.006	.008	ND	.001	ND
Lead	ND	ND	ND	ND	.003	.003	ND	.008	.001	ND	.001	.001	.015	ND
Selenium	.001	ND	.002	ND	ND	.001	ND	ND	ND	ND	ND	ND	ND	ND
Aluminum	.45	.12	1.2	.11	1.25	1.22	.35	.78	.67	.65	.98	.58	.51	.11
Barium	ND	ND	.31	ND	ND	ND	ND	ND	.12	.15	.14	ND	ND	ND
Calcium	45.0	.42	115	1.83	118	119	43.5	68.0	59.7	75.2	80.3	72.5	81.1	ND
Iron	.45	ND	4.98	ND	2.81	2.29	ND	.49	.88	1.10	2.24	ND	ND	ND
Magnesium	17.7	.14	29.0	.57	28.9	29.6	13.5	18.2	20.3	22.3	25.0	19.3	22.0	ND
Manganese	ND	ND	.09	ND	.09	.07	ND	ND	.37	.15	.19	ND	.06	ND
Mercury	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	.0002	ND	.0003	ND
Potassium	.16	1.97	2.49	.53	1.83	.75	.13	1.29	.25	.76	1.04	.11	.89	.36
Sodium	1.61	446	236	293	14.8	13.6	1.45	66.4	1.4	2.61	10.6	15.4	12.7	ND
Zinc	.17	ND	1.19	.13	.37	.37	ND	.2	.1	.12	ND	ND	ND	ND

ND - Not detected at method detection limits
* - Samples analyzed by Suburban Laboratories, Hillside, Illinois

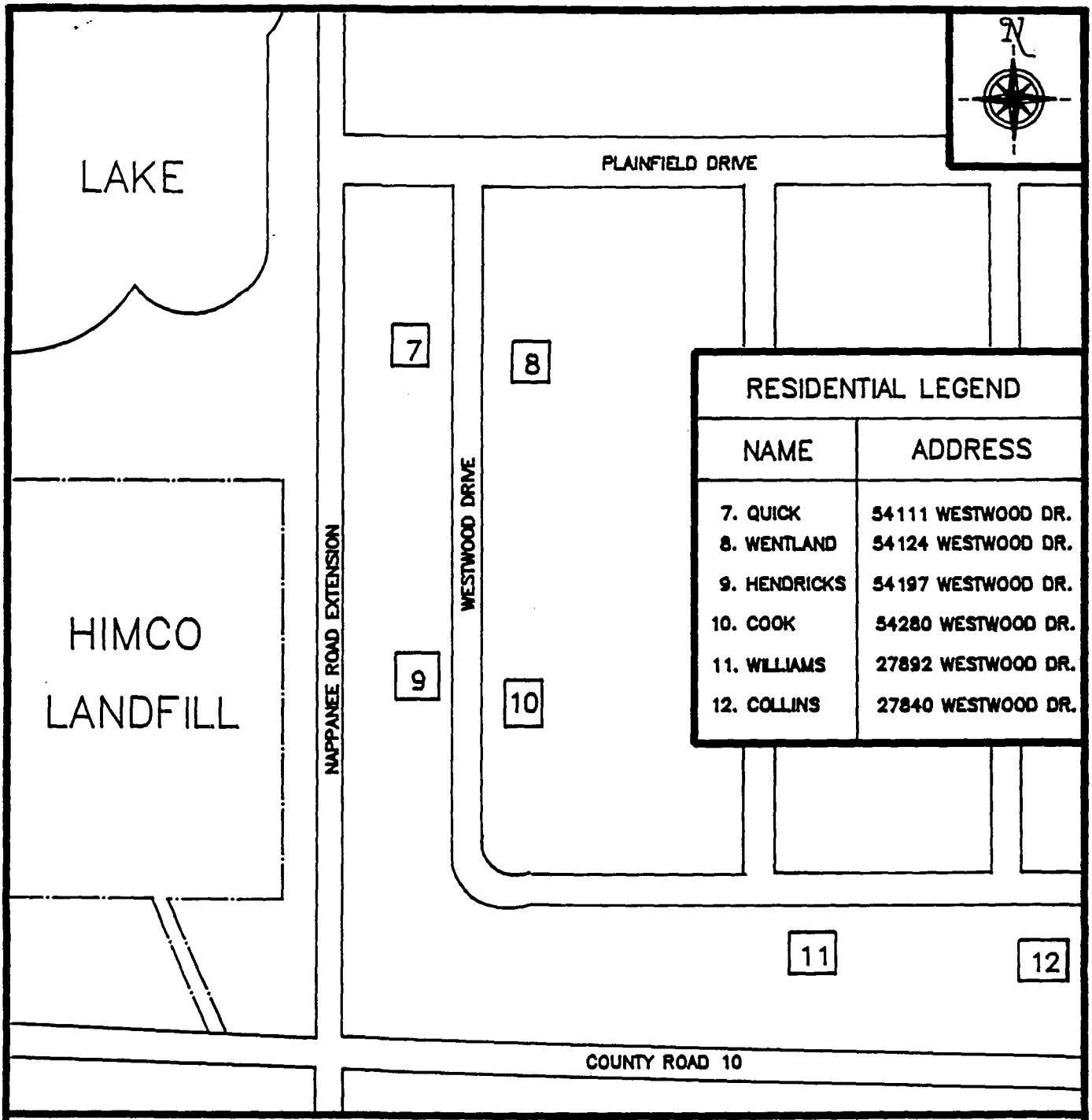


FIGURE 4

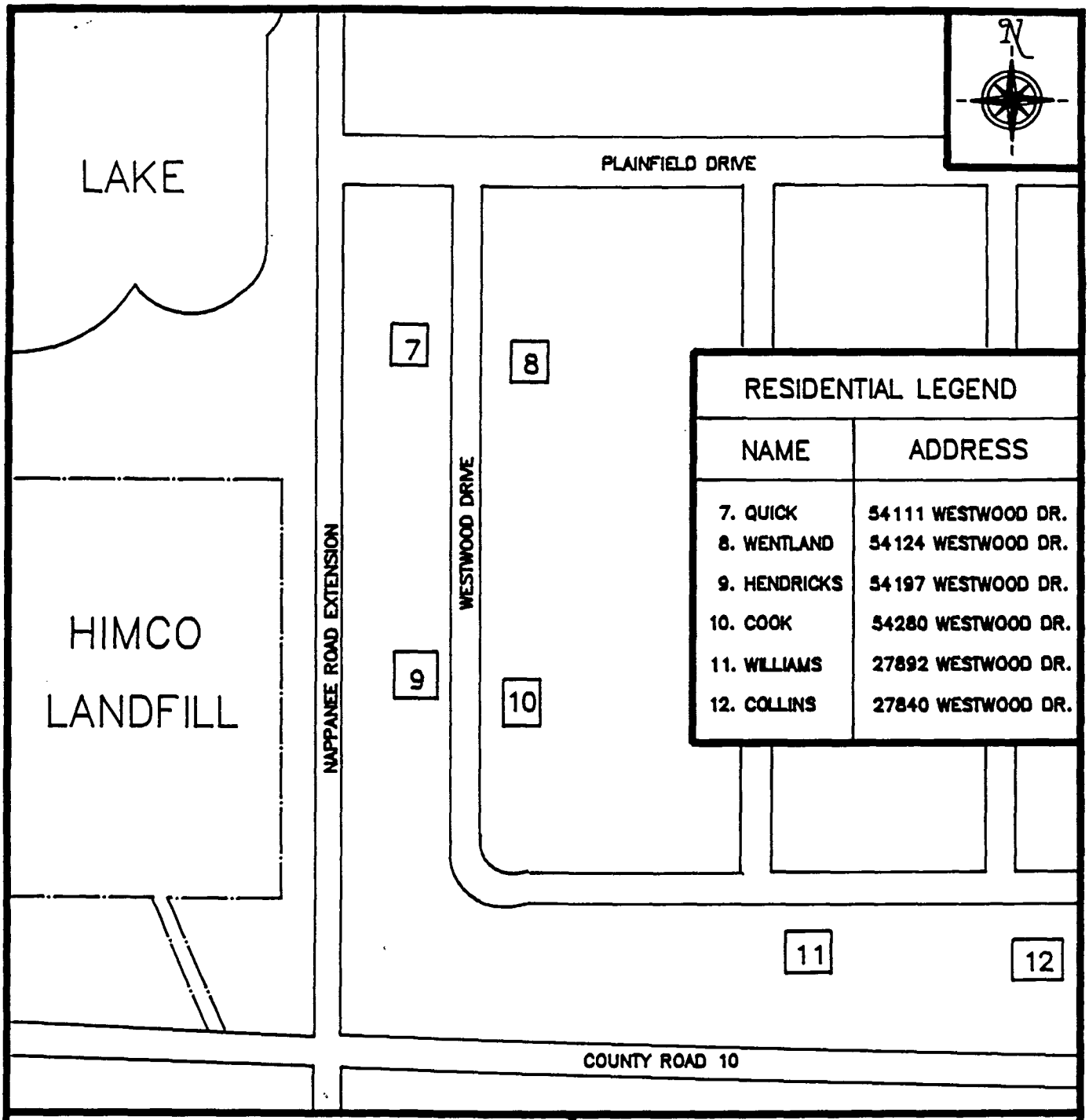
SAMPLE LOCATION MAP
FOR EASTERN RESIDENCES
HIMCO LANDFILL
ELKHART, INDIANA

NOT TO SCALE

WESTON MANAGERS DESIGNERS/CONSULTANTS
MAJOR PROGRAMS DIVISION

REGION V TECHNICAL ASSISTANCE TEAM

DRAWN BY	DATE	PCS #
K. AXE	4-25-90	2693
APPROVED BY	DATE	TDD #
C. CARON	4-25-90	S-9004-10



RESIDENTIAL LEGEND	
NAME	ADDRESS
7. QUICK	54111 WESTWOOD DR.
8. WENTLAND	54124 WESTWOOD DR.
9. HENDRICKS	54197 WESTWOOD DR.
10. COOK	54280 WESTWOOD DR.
11. WILLIAMS	27892 WESTWOOD DR.
12. COLLINS	27840 WESTWOOD DR.

FIGURE 4

SAMPLE LOCATION MAP
FOR EASTERN RESIDENCES
HIMCO LANDFILL
ELKHART, INDIANA

NOT TO SCALE

WESTON MANAGERS DESIGNERS/CONSULTANTS
MAJOR PROGRAMS DIVISION

REGION V TECHNICAL ASSISTANCE TEAM

DRAWN BY	DATE	PCS #
K. AXE	4-25-90	2693
APPROVED BY	DATE	TDD #
C. CARON	4-25-90	S-9004-10